Jan Delaval

Access DB# 92986 + 92987

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Beckville Examiner #: 79286 Date: 5/1/03
Art Unit: 1641 Phone Number 30 3-4232 Serial Number: 09/658,681
Mail Box and Bldg/Room Location: 9D01 Results Format Preferred (circle): PAPER DISK E-MAIL
9E12

If more than one search is submitted, please prioritize searches in order of need.

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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

_____

Earliest Priority Filing Date: _____

***For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**

Jan, please search claims: 1-3, 17, 18, 20-22, 37 and SEQ ID: 26

SEQ IDs: 1 and 2

Thanks

02 - 5/1/03
01 - 5/1/03 - 295-301
5/14/03 - 211 - 217
5/15/03 - 83789
5/16/03 - 44 - 120
5/17/03 - 69-71
5/18/03 - 25-34

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NA Sequence (#) ✓
AA Sequence (#) ✓
Structure (#) _____
Bibliographic ✓
Litigation _____
Fulltext _____
Patent Family _____
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Vendors and cost where applicable

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Dr.Link _____
Lexis/Nexis _____
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WWW/Internet _____
Other (specify) _____

PTO-1590 (8-01)

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FILE LAST UPDATED: 7 May 2003  (20030507/ED)

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 substance identification.


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L41  ANSWER 1 OF 16  HCAPLUS  COPYRIGHT 2003 ACS
AN   2003:174231  HCAPLUS
DN   138:220357
TI   Complexes comprising HLA class I molecule and antigenic
     peptide linked via binding pair- or antibody-coupling system for
     targeting and treating cancer, infection and autoimmune disease
IN   Savage, Philip Michael
PA   UK
SO   U.S. Pat. Appl. Publ., 50 pp., Cont.-in-part of U.S. Pat. Appl. 2002
     51,783.
     CODEN: USXXCO
DT   Patent
LA   English
IC   ICM  A61K039-395
     ICS  C07K016-46
NCL  424178100; 530391100
CC   15-2 (Immunochemistry)
     Section cross-reference(s): 2, 63
FAN.CNT 3
     PATENT NO.       KIND  DATE          APPLICATION NO.  DATE
     ---------------  ----  --------      ---------------  --------
PI   US 2003044415     A1   20030306      US 2002-116901   20020405 <--
     GB 2339782        A1   20000209      GB 1999-8333     19990412 <--
     WO 9964464        A2   19991216      WO 1999-GB1764   19990604 <--
     WO 9964464        A3   20000203
         W:  AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,
             DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS,
             JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK,
             MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,
             TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ,
             MD, RU, TJ, TM
        RW:  GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
             ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
             CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     US 2002051783     A1   20020502      US 2001-878158   20010608 <--
PRAI GB 1998-12227     A    19980605  <--
     GB 1999-8333      A    19990412  <--
```

WO 1999-GB1764 A2 19990604 <--
US 2000-724985 A2 20001128
US 2001-878158 A2 20010608

AB A complex including an HLA class I mol. and attaching means for selectively attaching the HLA class I mol. to a target is disclosed, and a method is provided for producing or enhancing an immunol. response against a target cell, by attaching said complex to the target cell. Where the target cell is diseased, foreign, or malignant cell, this method may be used to promote lysis of the target cell by T cells in the immune system. Where the target cell is an **antigen** presenting cell, this method may be used to promote proliferation of specific T cell clones. Uses include prevention and treatment of diseases including cancer, leukemia, infectious diseases, viral infections, such as HIV, bacterial infections, such as tuberculosis, and parasitic infections such as malaria.

ST HLA **antigen** monoclonal antibody coupling system cancer infection autoimmune

IT Transcription factors
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(EB1 (Epstein-Barr virus 1); complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT **Histocompatibility antigens**
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**HLA (human leukocyte-assocd. antigen)**; complexes comprising **HLA class I** mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT **Histocompatibility antigens**
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**HLA, class I**; complexes comprising **HLA class I** mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT **Histocompatibility antigens**
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**HLA, class II; complexes** comprising **HLA class I** mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT **Histocompatibility antigens**
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**HLA-A2**; complexes comprising **HLA class I** mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT **Antigens**
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(MAGE (melanoma-assocd. **antigen**), MAGE; complexes comprising **HLA class I** mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT **Antigens**
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(MAGE (melanoma-assocd. **antigen**), MART-1; complexes comprising **HLA class I** mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT **Antigens**
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(MAGE (melanoma-assocd. **antigen**), Mel-A; complexes comprising **HLA class I** mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT **Antigens**
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(MAGE (melanoma-assocd. **antigen**); complexes comprising **HLA class I** mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT Cell proliferation
(T cell; complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT Infection
(bacterial; complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT Proteins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(calmodulin-binding; complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT Drug delivery systems
(carriers; complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT Animal tissue culture
Antigen-presenting cell
Antitumor agents
Autoimmune disease
Epitopes
Human
Human herpesvirus 4
Human immunodeficiency virus
Infection
Influenza virus
Leukemia
Linking agents
Malaria
Measles virus
Microorganism
Parasite
Protein sequences
T cell (lymphocyte)
Tuberculosis
Vaccines
(complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT CA 125 (carbohydrate **antigen**)
CD20 (**antigen**)

Carcinoembryonic **antigen**
Prostate-specific **antigen**
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT Antibodies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT Avidins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT Calmodulins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT gag proteins
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(conjugate; complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT Antibodies
Antigens
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(conjugates; complexes comprising **HLA class I** mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT T cell (lymphocyte)
(cytotoxic; complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT Immunoglobulins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fragments; complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT Mucins
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gene **MUC1**; complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT Proteins
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(high-mol.-wt.; complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT Drug delivery systems
(immunoconjugates; complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT **Peptides, biological studies**
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(linker; complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT Proteins
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lytic; complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT Antibodies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(monoclonal; complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT T cell (lymphocyte)
(proliferation; complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT Blood
(sample; complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT Molecules
(small; complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT Neoplasm
(target cell; complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT Toxoids
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tetanus; complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT **Antigens**
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tumor-assocd.; complexes comprising **HLA class I** mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT Vaccines
(tumor; complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT Antitumor agents
(vaccines; complexes comprising HLA class I mol. and **antigenic peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

IT Infection
(viral; complexes comprising HLA class I mol. and **antigenic** **peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)
IT 147468-65-3 252290-47-4
RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(complexes comprising HLA class I mol. and **antigenic** **peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)
IT 9002-61-3, Human chorionic gonadotropin
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(complexes comprising HLA class I mol. and **antigenic** **peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)
IT 58-85-5, Biotin 9013-20-1, Streptavidin
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(complexes comprising HLA class I mol. and **antigenic** **peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)
IT 9001-78-9, Alkaline phosphatase
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(placental; complexes comprising HLA class I mol. and **antigenic** **peptide** linked via binding pair- or antibody-coupling system for targeting and treating cancer, infection and autoimmune disease)

L41 ANSWER 2 OF 16 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:276425 HCAPLUS
DN 136:278141
TI Cell fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy
IN Nicolette, Charles; Roberts, Bruce L.; Gong, Jianlin; Kufe, Donald
PA USA
SO U.S. Pat. Appl. Publ., 45 pp., Cont.-in-part of U.S. Ser. No. 618,917.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K048-00
ICS A61K039-00; C12N005-08
NCL 424093210
CC 15-2 (Immunochemistry)
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002041868	A1	20020411	US 2001-782492	20010212 <--
	WO 9937313	A1	19990729	WO 1999-US1464	19990125 <--

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI	US 1997-43609P	P	19970415 <--
	US 1998-88357P	P	19980126 <--
	US 1998-80041P	P	19980331 <--
	US 1998-60603	B1	19980415 <--
	WO 1999-US1464	W	19990125 <--

US 2000-181822P P 20000211
US 2000-184687P P 20000224
US 2000-618917 A2 20000718
US 2000-642701 A1 20000812

AB The invention is concerned with fusions of dendritic cells and **antigen** presenting cells. Also provided are methods of making and using these cell fusions, including methods of adoptive immunotherapy. The fusions according to the invention can also be used in methods for **antigen** discovery. The examples discuss the fusion of dendritic cells with cancer cells which express a tumor **antigen**, and the use of these fusion cells in cancer vaccines.

ST adoptive immunotherapy dendritic cell cancer fusion

IT Cell adhesion molecules
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ICAM-1 (intercellular adhesion mol. 1); fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

IT **Histocompatibility antigens**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**MHC (major histocompatibility complex), class I**; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

IT **Histocompatibility antigens**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**MHC (major histocompatibility complex), class II**; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

IT Carcinoma
(adenocarcinoma, fusion with dendritic cell; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

IT Antitumor agents
(adenocarcinoma; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

IT Mammary gland
Ovary, neoplasm
(carcinoma, fusion with dendritic cell; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

IT Mammary gland
Ovary, neoplasm
(carcinoma, inhibitors; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

IT T cell (lymphocyte)
(cytotoxic; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

IT Lung, neoplasm
Multiple myeloma
Neoplasm
Pancreas, neoplasm
(fusion with dendritic cell; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

IT Dendritic cell
(fusion with non-dendritic cell; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

IT Adoptive immunotherapy
Antigen presentation
Antigen-presenting cell

Antitumor agents
CD4-positive T cell
Cytolysis
Epitopes
Fusion, biological
Human
Immunostimulation
Infection
Vaccines
(fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

IT CA 125 (carbohydrate **antigen**)
CD80 (**antigen**)
CD86 (**antigen**)
Cytokines
Interleukin 2
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

IT **Peptides, biological studies**
Proteins
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

IT Mucins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(gene **MUC1**; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

IT Lung, neoplasm
Pancreas, neoplasm
(inhibitors; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

IT Antitumor agents
(lung; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

IT Antitumor agents
(mammary gland carcinoma; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

IT Antitumor agents
(metastasis; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

IT Antitumor agents
(myeloma; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

IT Prostate gland
(neoplasm, fusion with dendritic cell; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

IT Prostate gland
(neoplasm, inhibitors; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

IT Antitumor agents
(ovary carcinoma; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

IT Antitumor agents
(pancreas; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

IT Antitumor agents
(prostate gland; fusions of dendritic cells with non-dendritic cells

and their use in adoptive immunotherapy for cancer and other diseases)
IT **Antigens**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(surface; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)
IT **Antigens**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(tumor-assocd.; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)
IT Vaccines
(tumor; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)
IT Antitumor agents
(vaccines; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)
IT Infection
(viral; fusions of dendritic cells with non-dendritic cells and their use in adoptive immunotherapy for cancer and other diseases)

L41 ANSWER 3 OF 16 HCAPLUS COPYRIGHT 2003 ACS
AN **2001:185781** HCAPLUS
DN **134:236223**
TI **Antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**
IN **Taylor-Papadimitriou, Joyce; Heukamp, Lukas Carl; Offringa, Rienk; Melief, Cornelis Johanna Maria; Acres, Bruce; Thomas, Mireille**
PA Transgene S.A., Fr.; Imperial Cancer Research Technology, Ltd.
SO PCT Int. Appl., 81 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07K007-00
CC 15-2 (Immunochemistry)
Section cross-reference(s): 1, 3
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2001018035	A2	20010315	WO 2000-EP8761	20000907	<--
	WO 2001018035	A3	20011108			
	WO 2001018035	C2	20020906			
	W: AU, CA, JP					
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE					
	EP 1210430	A2	20020605	EP 2000-965943	20000907	<--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY					
PRAI	GB 1999-21242	A	19990908	<--		
	EP 1999-402237	A	19990910	<--		
	US 2000-187215P	P	20000303	<--		
	WO 2000-EP8761	W	20000907			

AB Described are **peptides** and **polypeptides** derived from the **MUC-1 polypeptide** which are able to activate cytotoxic T lymphocyte (CTL) response, analogs of such **peptides** and **polypeptides**, nucleotide sequences encoding such **peptides** and **polypeptides**, and therapeutic uses thereof. Moreover, indications for selecting appropriate minimal **antigenic MUC-1 polypeptides** with ref. to the HLA-type of the patient to be treated or tested are described. The MHC class I restricted epitopes and T cells can be used to diagnose, prevent or treat cancer or to cause immunosuppression.
ST mucin **MUC1 peptide antigen** immune response
IT **Histocompatibility antigens**

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**HLA-A11; antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT **Histocompatibility antigens**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**HLA-A1; antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT **Histocompatibility antigens**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**HLA-A24; antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT **Histocompatibility antigens**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**HLA-A2; antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT **Histocompatibility antigens**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**HLA-A3; antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT **Histocompatibility antigens**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**HLA-B, HLA-**B8 **antigens; antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT **Histocompatibility antigens**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**HLA-B7; antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT **Histocompatibility antigens**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**MHC (major histocompatibility complex), class I; antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT Cell proliferation
(T cell; **antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT Epitopes
Gene therapy
Immunosuppressants
Molecular cloning
Plasmid vectors
Vaccines
Virus vectors
(**antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT TCR (T cell receptors)
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(**antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT Diagnosis
(cancer; **antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT T cell (lymphocyte)
(cytotoxic; **antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT Neoplasm
(diagnosis; **antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT Mucins
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(episialins; **antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT cDNA sequences
(for human mucin **MUC-1** and derived **peptides**)

IT Animal cell
(mammalian, recombinant expression host; **antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT **Protein sequences**
(of human mucin **MUC-1** and derived **peptides**)

IT T cell (lymphocyte)
(proliferation; **antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT Animal cell
Yeast
(recombinant expression host; **antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT Interferons
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(.gamma., identifying MHC class I restricted T cell response; **antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT 330486-35-6 330486-36-7 330486-37-8 330486-38-9 330486-39-0
330486-40-3 330486-41-4 330486-42-5 330486-43-6 330486-44-7
330486-45-8 330486-46-9 330486-47-0 330486-48-1 330486-49-2
330486-50-5 330486-51-6 330486-52-7 330486-53-8 330486-54-9
330486-55-0 330486-56-1 330486-57-2 330486-58-3 330486-59-4
330486-60-7 330486-61-8 330486-62-9 330486-63-0 330486-64-1
330486-65-2
RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(DNA encoding **antigenic** epitope **peptide**; **antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT 330486-34-5, Episialin (human)
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(amino acid sequence; **antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT 121501-23-3 158092-77-4 257943-64-9 257943-65-0 257943-68-3
300810-94-0 329365-51-7 329365-52-8 329365-53-9 329365-54-0
329365-55-1 329365-56-2 329365-57-3 329365-58-4 329365-59-5
329365-60-8 329365-61-9 329365-62-0 329365-63-1 329365-66-4
329365-67-5 329365-68-6 329365-69-7 329365-71-1 329365-72-2

329365-73-3 329365-74-4 329365-75-5 329365-76-6 329365-77-7
329365-78-8 329365-79-9 329365-80-2
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**antigenic** epitope **peptide**; **antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT 330030-02-9, DNA (human episialin cDNA plus flanks)
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(nucleotide sequence; **antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT 330487-05-3
RL: PRP (Properties)
(unclaimed protein sequence; **antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

IT 129633-71-2 140397-28-0 141368-69-6 152647-27-3 160790-25-0
180695-71-0 199185-50-7 199185-53-0 330431-79-3 330431-80-6
330431-81-7 330431-82-8
RL: PRP (Properties)
(unclaimed sequence; **antigenic** properties and therapeutic uses of **MUC-1** derived **peptides**)

L41 ANSWER 4 OF 16 HCAPLUS COPYRIGHT 2003 ACS
AN **2000:738783** HCAPLUS
DN **133:280561**
TI **Peptides** for induction of an immune reaction against tumor cells
IN Brossart, Peter; Stevanovic, Stefan; Brugger, Wolfram; Kanz, Lothar; Rammensee, Hans Georg
PA Eberhard-Karls-Universitaet Tuebingen Universitaetsklinikum, Germany
SO Ger. Offen., 8 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM C07K007-06
ICS A61K039-00; A61K038-08; A61P037-04
CC 15-2 (Immunochemistry)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	DE 19917195	A1	20001019	DE 1999-19917195	19990416	<--
	WO 2000063363	A1	20001026	WO 2000-EP2699	20000328	<--
	W: AU, CA, JP, US					
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE					
	EP 1171587	A1	20020116	EP 2000-926764	20000328	<--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
PRAI	DE 1999-19917195	A	19990416	<--		
	WO 2000-EP2699	W	20000328			

AB A **peptide** to induce an immune reaction against tumor cells, is described. It exhibits a fragment of proteins encoded by gene **MUC-1**, which can induce a HLA-A2-restricted immune reaction.
ST antitumor agent **MUC1 peptide** CTL cytotoxicity
IT **Histocompatibility antigens**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**HLA-A2**; **peptides** for induction of immune reaction against tumor cells)
IT T cell (lymphocyte)
(cytotoxic; **peptides** for induction of immune reaction against

tumor cells)
IT Mucins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(episialins; **peptides** for induction of immune reaction
against tumor cells)
IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**muc1**; **peptides** for induction of immune reaction
against tumor cells)
IT **Antigen** presentation
Antitumor agents
Cytotoxicity
Dendritic cell
MHC restriction
(**peptides** for induction of immune reaction against tumor
cells)
IT 238736-51-1, Stappvhnv **peptide**+ 238736-52-2, Llltvltv
peptide+
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**peptides** for induction of immune reaction against tumor
cells)
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Anon; EP 823438 A1 HCAPLUS
(2) Anon; WO 9803502 A2 HCAPLUS

L41 ANSWER 5 OF 16 HCAPLUS COPYRIGHT 2003 ACS
AN **2000:628172** HCAPLUS
DN **133:221589**
TI T-cell immunostimulatory **glycopeptides**
IN Burchell, Joy; **Taylor-Papadimitriou, Joyce**
PA Imperial Cancer Research Technology Limited, UK
SO PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07K014-47
ICS C12N015-00
CC 15-2 (Immunochemistry)
Section cross-reference(s): 1, 14
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000052046	A1	20000908	WO 2000-GB724	20000301 <--
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1157036	A1	20011128	EP 2000-906521	20000301 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002542156	T2	20021210	JP 2000-602270	20000301 <--
PRAI	GB 1999-4695	A	19990301 <--		
	WO 2000-GB724	W	20000301		

AB The authors disclose **glycopeptides** capable of inducing a strong proliferative response by human T cells. In one embodiment the

glycopeptide is derived from the **MUC1** tandem repeat. This **peptide** enhances the proliferative response of peripheral blood lymphocytes from humans with breast cancer and induces a type 1 cytokine profile.

ST immunostimulation **glycopeptide** T cell

IT Cell proliferation
(T cell; in response to **glycopeptides**)

IT **Glycopeptides**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(as T-cell immunostimulants)

IT Mucins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(episialins; T-cell proliferative response to **glycopeptides** based on tandem repeat of)

IT Bioassay
(for T-cell response to mitogen)

IT Immunostimulants
(**glycopeptides** as)

IT T cell (lymphocyte)
(helper cell/inducer, TH1; immunostimulatory **glycopeptides** induce differentiation to)

IT Species differences
(in T-cell proliferative response to **glycopeptides**)

IT Antigen-presenting cell
(in enhanced proliferative response by T-cells to **glycopeptides**)

IT Mammary gland
(neoplasm; **glycopeptide**-induced proliferative response of T-cells from humans with)

IT T cell (lymphocyte)
(proliferation; in response to **glycopeptides**)

IT Vaccines
Vaccines
(tumor; immunostimulatory **glycopeptides** for T-cells in)

IT Antitumor agents
Antitumor agents
(vaccines; immunostimulatory **glycopeptides** for T-cells in)

IT Adoptive immunotherapy
(with T-cells expanded by immunostimulatory **glycopeptides**)

IT Diagnosis
(with immunostimulatory **glycopeptides**)

IT 5143-15-7D, **peptides** contg. 14215-68-0D, N-Acetyl-.alpha.-D-galactosamine, **peptides** contg. 210696-99-4 210697-01-1 210697-02-2 210697-03-3 210697-04-4 210697-09-9 210697-13-5 290828-76-1D, glycosylated
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(proliferative response of T-cells to)

IT 291527-73-6
RL: PRP (Properties)
(unclaimed protein sequence; t-cell immunostimulatory **glycopeptides**)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Bay Dev Corp Sa; GB 2288401 A 1995 HCAPLUS
(2) Biomembrane Inst; WO 8908711 A 1989 HCAPLUS
(3) Boehringer Ingelheim Int; WO 9201055 A 1992 HCAPLUS
(4) Dana Farber Cancer Inst Inc; WO 9817300 A 1998 HCAPLUS
(5) Finn, O; WO 9503825 A 1995 HCAPLUS
(6) Hanisch, F; DE 19758400 A 1999 HCAPLUS

(7) Kirin, B; EP 0754703 A 1997 HCAPLUS
(8) Livingston, P; WO 9734921 A 1997 HCAPLUS
(9) Nilsson, K; WO 9607753 A 1996 HCAPLUS
(10) United Biomedical Inc; WO 9622067 A 1996 HCAPLUS

L41 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2003 ACS
AN 2000:573687 HCAPLUS
DN 133:176168
TI **Antigenic peptide** concatomers
IN Shankara, Srinivas; Nicolette, Charles A.
PA Genzyme Corporation, USA
SO PCT Int. Appl., 72 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K039-00
ICS A61K038-00; C12N015-00; C12N015-19
CC 15-2 (Immunochemistry)
Section cross-reference(s): 3
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2000047229	A2	20000817	WO 2000-US3655	20000210	<--
	WO 2000047229	A3	20001214			
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
	EP 1150708	A2	20011107	EP 2000-908619	20000210	<--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
	JP 2002536008	T2	20021029	JP 2000-598180	20000210	<--
	US 2002065241	A1	20020530	US 2001-928213	20010810	<--
PRAI	US 1999-120002P	P	19990211	<--		
	US 1999-161845P	P	19991027	<--		
	US 1999-162170P	P	19991028	<--		
	WO 2000-US3655	W	20000210			

AB Recombinant polynucleotide that contains a plurality of first polynucleotides encoding an **antigenic peptide** are provided by this invention. The first polynucleotides are operatively linked to each other to enhance translation of the polynucleotides to the **antigenic peptide** and binding of the **antigenic peptide** to MHC mols. In a further embodiment, the recombinant contains a plurality of a second polynucleotide encoding multiple copies of **antigenic peptides** having an amino acid sequence that is different from the **peptides** encoded by the first polynucleotides. The polynucleotides are useful as cancer vaccines or in adoptive immunotherapy. In these embodiments, the polynucleotides encode an **antigenic peptide** that will induce an immune response to a tumor or cancer. Alternatively, the **polypeptides** encode **antigens** that induce T cell anergy for use in autoimmune disorders. Still further, the **antigen** is a pathogenic **antigen** to induce an immune response against a pathogen such a virus or bacterial pathogen.

ST pathogen cancer **antigen** vaccine adoptive immunotherapy
IT **Histocompatibility antigens**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(**MHC** (**major histocompatibility complex**); polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)

IT Proteins, specific or class
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(TRP-1 (tyrosinase-related protein 1); polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)

IT Proteins, specific or class
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(TRP-2 (tyrosinase-related protein 2); polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)

IT **Antigens**
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(costimulatory mol.; polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)

IT Lymphocyte
(effector cell, immune; polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)

IT Mucins
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(episialins, **Muc-1**; polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)

IT Drug delivery systems
(gene delivery vehicle; polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)

IT Glycoproteins, specific or class
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gp100; polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)

IT Glycoproteins, specific or class
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gp209; polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)

IT Gene, animal
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(mRNA stability element of .alpha.-globulin gene; polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)

IT Genetic element
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(mRNA stability; polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)

IT Animal cell
(mammalian; polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in

adoptive immunotherapy)

IT **Antigens**
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(melanoma-assocd., MART-1; polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)

IT **Antigens**
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(melanoma-assocd., melan-A; polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)

IT **Antigens**
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(melanoma-assocd.; polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)

IT Adoptive immunotherapy
Animal virus
Antigen-presenting cell
Bacteria (Eubacteria)
Dendritic cell
Epitopes
Eukaryote (Eukaryotae)
Immunomodulators
Immunotherapy
Liposomes
Mammal (Mammalia)
Pathogen
Plasmids
Prokaryote
Vaccines
Virus vectors
(polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)

IT **Peptides, biological studies**
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)

IT Cytokines
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)

IT Carcinoembryonic **antigen**
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)

IT Polynucleotides
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)

IT neu (receptor)
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)
IT mRNA
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(stability element; polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)
IT **Antigens**
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(tumor-assocd.; polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)
IT Vaccines
Vaccines
(tumor; polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)
IT Antitumor agents
Antitumor agents
(vaccines; polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)
IT Globulins, biological studies
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.alpha.-globulin; polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)
IT 137632-09-8, HER2 receptor kinase
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)
IT 9002-10-2, Tyrosinase
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tumor-assocd. **antigen**; polynucleotides encoding tumor-assocd. **antigen**, cytokine and costimulatory mol. for use as cancer vaccine or in adoptive immunotherapy)

L41 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2003 ACS
AN 2000:98749 HCAPLUS
DN 132:147631
TI Tumor-associated **antigen peptides** and use thereof in anti-tumor vaccines
IN Eisenbach, Lea; Carmon, Lior; Tirosh, Boaz; Bar-Haim, Erez; Paz, Adrian; Fridkin, Matityahu; Fitzer-Attas, Cheryl
PA Yeda Research and Development Company Ltd At the Weizmann Institute of Scien, Israel; Bio-Technology General Corp.
SO PCT Int. Appl., 113 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C12N015-12
ICS C07K014-47; C07K014-705; C12N009-16; C12N009-64; A61K038-17; A61K038-46; A61K038-47; C12N015-55; C12N015-57; C12N005-08

CC 3-3 (Biochemical Genetics)
Section cross-reference(s): 1, 6, 14, 15

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2000006723	A1	20000210	WO 1999-IL417	19990729	<--
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
	AU 9950629	A1	20000221	AU 1999-50629	19990729	<--
	EP 1100901	A1	20010523	EP 1999-935028	19990729	<--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
PRAI	IL 1998-125608	A	19980730	<--		
	WO 1999-IL417	W	19990729	<--		

AB The present invention relates to tumor-assocd. **antigen** (TAA) **peptides**, polynucleotides encoding TAAs, cells presenting TAAs, and uses thereof in anti-tumor vaccines. More particularly, the present invention relates to tumor-assocd. **antigen peptides** derived from Uroplakin Ia, Ib, II and III, Prostate specific **antigen** (PSA), Prostate acid phosphatase (PAP) and Prostate specific membrane **antigen** (PSMA), BA-46 (Lactadherin), Mucin (**MUC-1**), and Teratocarcinoma-derived growth factor (CRIPTO-1) and the use of same in anti-tumor vaccines to prevent or cure bladder, prostate, breast or other cancers, carcinomas in particular. Most particularly, the present invention relates to tumor-assocd. **antigen peptides** which are presentable to the immune system by HLA-A2 mols. Sequences of the disclosed TAAs are provided.

ST sequence tumor assocd **antigen** cancer vaccine

IT **Histocompatibility antigens**
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**HLA, class II**, binding of TAAs to; modified tumor-assocd. **antigen** (TAA) **peptides** and use thereof in anti-tumor vaccines)

IT **Histocompatibility antigens**
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**MHC (major histocompatibility complex), class I**, binding of TAAs to; modified tumor-assocd. **antigen** (TAA) **peptides** and use thereof in anti-tumor vaccines)

IT Prostate-specific **antigen**
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(TAAs derived from; tumor-assocd. **antigen** (TAA) **peptides** and use thereof in anti-tumor vaccines)

IT Proteins, specific or class
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Uroplakin II, TAAs derived from; tumor-assocd. **antigen** (TAA) **peptides** and use thereof in anti-tumor vaccines)

IT Proteins, specific or class
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Uroplakin III, TAAs derived from; tumor-assocd. **antigen** (TAA) **peptides** and use thereof in anti-tumor vaccines)

IT Proteins, specific or class
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Uroplakin Ia, TAAs derived from; tumor-assocd. **antigen** (TAA) **peptides** and use thereof in anti-tumor vaccines)

IT Proteins, specific or class
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Uroplakin Ib, TAAs derived from; tumor-assocd. **antigen** (TAA) **peptides** and use thereof in anti-tumor vaccines)

IT **Peptides, biological studies**
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(analogs; modified tumor-assocd. **antigen** (TAA) **peptides** and use thereof in anti-tumor vaccines)

IT Intestine, neoplasm
(colon; modified tumor-assocd. **antigen** (TAA) **peptides** and use thereof in anti-tumor vaccines)

IT **Peptides, biological studies**
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(cyclic, modification of; modified tumor-assocd. **antigen** (TAA) **peptides** and use thereof in anti-tumor vaccines)

IT Polynucleotides
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(encoding TAAs; modified tumor-assocd. **antigen** (TAA) **peptides** and use thereof in anti-tumor vaccines)

IT Mucins
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(episialins, TAAs derived from; tumor-assocd. **antigen** (TAA) **peptides** and use thereof in anti-tumor vaccines)

IT B cell (lymphocyte)
Dendritic cell
Fibroblast
Macrophage
(expression of TAAs in; modified tumor-assocd. **antigen** (TAA) **peptides** and use thereof in anti-tumor vaccines)

IT T cell (lymphocyte)
(helper cell, use in vaccine; modified tumor-assocd. **antigen** (TAA) **peptides** and use thereof in anti-tumor vaccines)

IT Proteins, specific or class
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lactadherin (BA-46), TAAs derived from; tumor-assocd. **antigen** (TAA) **peptides** and use thereof in anti-tumor vaccines)

IT Mammal (Mammalia)
Rodent
(mammalian tumor-assocd. **antigen** (TAA) **peptides** and use thereof in anti-tumor vaccines)

IT Carcinoma
Ovary, neoplasm
Pancreas, neoplasm
Stomach, neoplasm
Thyroid gland, neoplasm
(modified tumor-assocd. **antigen** (TAA) **peptides** and use thereof in anti-tumor vaccines)

IT Head
Mammary gland
Neck, anatomical
Prostate gland
(neoplasm; modified tumor-assocd. **antigen** (TAA)

peptides and use thereof in anti-tumor vaccines)

IT Proteins, specific or class
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(prostate-specific membrane **antigen**, TAAs derived from; tumor-assocd. **antigen** (TAA) **peptides** and use thereof in anti-tumor vaccines)

IT Growth factors, animal
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(teratocarcinoma-derived, TAAs derived from; tumor-assocd. **antigen** (TAA) **peptides** and use thereof in anti-tumor vaccines)

IT Antitumor agents
Protein sequences
(tumor-assocd. **antigen peptides** and use thereof in anti-tumor vaccines)

IT **Peptides, biological studies**
RL: BAC (Biological activity or effector, except adverse); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(tumor-assocd. **antigen peptides** and use thereof in anti-tumor vaccines)

IT **Antigens**
RL: BAC (Biological activity or effector, except adverse); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(tumor-assocd.; tumor-assocd. **antigen peptides** and use thereof in anti-tumor vaccines)

IT Vaccines
Vaccines
(tumor; tumor-assocd. **antigen peptides** and use thereof in anti-tumor vaccines)

IT Antitumor agents
Antitumor agents
(vaccines; tumor-assocd. **antigen peptides** and use thereof in anti-tumor vaccines)

IT 151423-95-9P 151423-99-3P 160213-53-6P 160213-54-7P 160214-77-7P
160214-78-8P 160215-49-6P 168650-46-2P 187968-03-2P 187968-05-4P
187968-08-7P 187968-09-8P 187968-10-1P 187968-15-6P 238736-52-2P
257943-36-5P 257943-37-6P 257943-38-7P 257943-39-8P 257943-40-1P
257943-41-2P 257943-42-3P 257943-43-4P 257943-44-5P 257943-45-6P
257943-46-7P 257943-47-8P 257943-48-9P 257943-49-0P 257943-50-3P
257943-51-4P 257943-52-5P 257943-53-6P 257943-54-7P 257943-55-8P
257943-56-9P 257943-57-0P 257943-58-1P 257943-59-2P 257943-60-5P
257943-61-6P 257943-62-7P 257943-63-8P 257943-64-9P 257943-65-0P
257943-66-1P 257943-67-2P 257943-68-3P 257943-69-4P 257943-70-7P
257943-71-8P 257943-72-9P 257943-73-0P 257943-74-1P 257943-75-2P
257943-76-3P 257943-77-4P 257943-78-5P 257943-79-6P 257943-80-9P
257943-81-0P 257943-82-1P 257943-83-2P 257943-84-3P 257943-85-4P
257943-86-5P 257943-87-6P 257943-88-7P 257943-89-8P 257943-90-1P
257943-91-2P 257943-92-3P 257943-93-4P 257943-94-5P 257943-95-6P
257943-96-7P 257943-97-8P
RL: BAC (Biological activity or effector, except adverse); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(amino acid sequence; modified tumor-assocd. **antigen** (TAA) **peptides** and use thereof in anti-tumor vaccines)

IT 9001-77-8
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)
(prostate, TAAs derived from; tumor-assocd. **antigen** (TAA)
peptides and use thereof in anti-tumor vaccines)
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L41 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2003 ACS
AN **1999:25098** HCAPLUS
DN **130:221860**
TI A short synthetic **peptide** (DTRPAP) induces anti-mucin (**MUC-1**) antibody, which is reactive with human ovarian and breast cancer cells
AU Avichezer, Dody; **Taylor-Papadimitriou, Joyce**; Arnon, Ruth
CS Department of Immunology, The Weizmann Institute of Science, Rehovot, 76100, Israel
SO Cancer Biochemistry Biophysics (**1998**), 16(1-2), 113-128
CODEN: CABCD4; ISSN: 0305-7232
PB Gordon & Breach Science Publishers
DT Journal
LA English
CC 15-3 (Immunochemistry)
AB The present study describes the prodn. of a synthetic **hexapeptide** (DTRPAP)-based anti-mucin (**MUC-1**) antibody, similar to those produced using either the intact mucin antigen or tumor exts. This antibody was generated by immunization of rabbits with the synthetic **peptide** conjugated to bovine serum albumin as a carrier. Using both the ELISA and FACS anal. methods, we have shown that the antibody is reactive with human ovarian and breast cancer cells, but not with normal epithelial breast cells. This antibody is different from the previously reported anti-mucin HMFG-1, HMFG-2 and SM-3 monoclonal antibodies, since competitive expts. with the free synthetic **peptide** revealed only a 30% inhibition of HMFG-1 binding to the ovarian (OVCAR-3) cancer cells, as compared to 78% inhibition of the anti-synthetic **peptide** antibody. The **peptide** was non-inhibitory for HMFG-2, and induced a significant and reproducible stimulation of the SM-3 binding activity to the tumor cells.
ST **MUC1 peptide** antibody cancer diagnosis
IT Diagnosis
(cancer; short synthetic **peptide** (DTRPAP) induces anti-mucin (**MUC-1**) antibody, which is reactive with human ovarian and breast cancer cells)
IT Neoplasm
(diagnosis; short synthetic **peptide** (DTRPAP) induces anti-mucin (**MUC-1**) antibody, which is reactive with human ovarian and breast cancer cells)
IT Mucins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(episialins; short synthetic **peptide** (DTRPAP) induces anti-mucin (**MUC-1**) antibody, which is reactive with human ovarian and breast cancer cells)
IT Mammary gland
(neoplasm; short synthetic **peptide** (DTRPAP) induces

anti-mucin (**MUC-1**) antibody, which is reactive with human ovarian and breast cancer cells)

IT Ovary, neoplasm
(short synthetic **peptide** (DTRPAP) induces anti-mucin (**MUC-1**) antibody, which is reactive with human ovarian and breast cancer cells)

IT Antibodies
RL: BAC (Biological activity or effector, except adverse); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(short synthetic **peptide** (DTRPAP) induces anti-mucin (**MUC-1**) antibody, which is reactive with human ovarian and breast cancer cells)

IT 157414-48-7
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)
(short synthetic **peptide** (DTRPAP) induces anti-mucin (**MUC-1**) antibody, which is reactive with human ovarian and breast cancer cells)

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L41 ANSWER 9 OF 16 HCAPLUS COPYRIGHT 2003 ACS

AN **1998:799168** HCAPLUS

DN **130:152317**

TI Crystal structure at 1.95 .ANG. resolution of the breast tumor-specific antibody SM3 complexed with its **peptide** epitope reveals novel hypervariable loop recognition

AU Dokurno, Pawel; Bates, Paul A.; Band, Heather A.; Stewart, Lorna M. D.; Lally, John M.; Burchell, Joy M.; **Taylor-Papadimitriou, Joyce**; Snary, David; Sternberg, Michael J. E.; Freemont, Paul S.

CS Molecular Structure and Function Laboratory, Imperial Cancer Research Fund, London, WC2A 3PX, UK

SO Journal of Molecular Biology (**1998**), 284(3), 713-728
CODEN: JMOBAK; ISSN: 0022-2836

PB Academic Press

DT Journal

LA English

CC 15-3 (Immunochemistry)
Section cross-reference(s): 75

AB The anti-breast tumor antibody SM3 has a high selectivity in reacting specifically with carcinoma-assocd. mucin. SM3 recognizes the core repeating motif (Pro-Asp-Thr-Arg-Pro) of aberrantly glycosylated

epithelial mucin **MUC1**, and has potential as a therapeutic and diagnostic tool. Here the authors report the crystal structure of the Fab fragment of SM3 in complex with a 13-residue **MUC1** **peptide** antigen (Thr1P-Ser2P-Ala3P-Pro4P-Asp5P-Thr6P-Arg7P-Pro8P-Ala9P-Pro10P-Gly11P-Ser12P-Thr13P). The SM3-**MUC1** **peptide** structure was solved by mol. replacement, and the current model is refined at 1.95 .ANG. resoln. with an R-factor of 21.3% and R-free 28.3%. The **MUC1** **peptide** is bound both by non-polar interactions and hydrogen bonds in an elongated groove in the antibody-combining site through interactions with CDR regions, three of the light chain (L1, L2, L3) and two of the heavy chain (H1 and H3). The conformation of the **peptide** is mainly extended with no discernable std. secondary structure. There is a single non-proline cis-**peptide** bond in H3 (Val95H-Gly96H-Gln97H-Phe98H-Ala101H-Tyr102H) between Gly96H and Gln97H, which appears to play a role in SM3-**peptide** antigen interactions, and represents the first such example within an antibody hypervariable loop. The SM3-**MUC1** **peptide** structure has implications for rational therapeutic and diagnostic antibody engineering. (c) 1998 Academic Press.

ST crystal structure antibody Fab **peptide** **MUC1** mucin

IT Mucins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(episialins; crystal structure of SM3 antibody Fab fragment complexed with **peptide** of)

IT Immunoglobulins
RL: PRP (Properties)
(fragments, Fab fragments, complexes with **MUC1** **peptide**; crystal structure of)

IT Diastereomers
(geometric; non-proline cis-**peptide** bond in SM3 antibody Fab fragment heavy chain CDR3 region in interaction with **peptide** epitope)

IT Molecular surface
(of SM3 antibody Fab fragment complexed with **peptide**)

IT Crystal structure
(of breast tumor **MUC1** **peptide** complexed with SM3 antibody Fab fragment)

IT 200066-32-6D, antibody Fab complexes
RL: PRP (Properties)
(crystal structure of)

RE.CNT 61 THERE ARE 61 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L41 ANSWER 10 OF 16 HCAPLUS COPYRIGHT 2003 ACS
AN 1998:455788 HCAPLUS
DN 129:188103
TI Anti-**MUC1** antibodies react directly with **MUC1** **peptides** presented by class I H2 and HLA molecules
AU Apostolopoulos, Vasso; Chelvanayagam, Gareth; Xing, Pei-Xiang; McKenzie, Ian F. C.
CS Austin Research Inst., Victoria, Australia
SO Journal of Immunology (**1998**), 161(2), 767-775
CODEN: JOIMA3; ISSN: 0022-1767
PB American Association of Immunologists
DT Journal
LA English
CC 15-2 (Immunochemistry)
AB **Peptides** bound in the groove of MHC class I mols. and detected by cytotoxic T cells (CTLs) are not normally accessible to Ab. The authors now report that **MUC1 peptides** that are bound within the groove of MHC class I mols. (H2 and HLA) and that can be detected by CTLs can also be detected by anti-**MUC1** Abs. MAbs to the middle and C-terminal regions of the class I-assocd. **peptides** but not to the N terminus could react with **MUC1 peptides**

bound to H2Kb and HLA-A*0201, and only to the mid-region for H2Db, by flow cytometry and also to block CTL activity. Mol. modeling showed that the N terminus is buried (and not accessible), whereas the **midpeptide** residues form a loop and the C terminus is free, making these two regions accessible to Ab. The findings demonstrate for the first time that **peptides** assocd. with class I mols. can be detected by anti-**peptide.**

ST **MUC1** antibody **peptide** MHC class I

IT **Histocompatibility antigens**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**H-2Db**; anti-**MUC1** antibodies react directly with **MUC1 peptides** presented by class I **H-2** and **HLA** mols.)

IT **Histocompatibility antigens**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**H-2Kb**; anti-**MUC1** antibodies react directly with **MUC1 peptides** presented by class I **H-2** and **HLA** mols.)

IT **Histocompatibility antigens**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**HLA-A**, *0201; anti-**MUC1** antibodies react directly with **MUC1 peptides** presented by class I **H-2** and **HLA** mols.)

IT **Histocompatibility antigens**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**MHC** (**major histocompatibility complex**), **class I**; anti-**MUC1** antibodies react directly with **MUC1 peptides** presented by class I **H-2** and **HLA** mols.)

IT **Antigen** presentation
Molecular modeling
(anti-**MUC1** antibodies react directly with **MUC1 peptides** presented by class I H-2 and HLA mols.)

IT **Peptides, biological studies**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(anti-**MUC1** antibodies react directly with **MUC1 peptides** presented by class I H-2 and HLA mols.)

IT Antibodies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(anti-**MUC1** antibodies react directly with **MUC1 peptides** presented by class I H-2 and HLA mols.)

IT Mucins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(episialins; anti-**MUC1** antibodies react directly with **MUC1 peptides** presented by class I H-2 and HLA mols.)

IT 36301-96-9 126391-97-7 129474-44-8 130769-72-1 141646-02-8 142115-21-7 158092-77-4 198020-60-9 211811-17-5
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(anti-**MUC1** antibodies react directly with **MUC1 peptides** presented by class I H-2 and HLA mols.)

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L41 ANSWER 11 OF 16 HCAPLUS COPYRIGHT 2003 ACS
AN 1998:358210 HCAPLUS
DN 129:174383
TI Anti-**MUC1** class I restricted CTLs in metastatic breast cancer patients immunized with a synthetic **MUC1 peptide**
AU Reddish, Mark A.; Maclean, Grant D.; Koganty, R. Rao; Kan-Mitchell, June; Jones, Vicky; Mitchell, Malcolm S.; Longenecker, B. Michael
CS ID Vaccine, Bothell, WA, USA
SO International Journal of Cancer (**1998**), 76(6), 817-823
CODEN: IJCNAW; ISSN: 0020-7136
PB Wiley-Liss, Inc.
DT Journal
LA English
CC 15-2 (Immunochemistry)
AB Sixteen metastatic breast cancer patients were immunized with a low dose (5 .mu.g) of a 16 amino acid **MUC1 peptide** (GVTSAPDTRPAPGSTA) conjugated to KLH (BP16-KLH) plus DETOX adjuvant and evaluated for antibody titers against **MUC1 peptide** and KLH and for cytotoxic lymphocyte (CTL) activity using class I KLA-matched **MUC1**-pos. tumor targets. All patients generated strong anti-KLH IgG responses. Only 3 patients developed an anti-**MUC1** IgG

response, which was weak in magnitude. As it is controversial whether human cancer patients generate class-I-restricted CTL against **MUC1**, we examd. anti-**MUC1** CTL activity of PBLs following 4 immunizations with BP16-KLH. The generation of **MUC1**-specific CTLs required only a 6-day in vitro stimulation of patients' T-cells with synthetic **MUC1-peptide**-pulsed autologous APCs. The assay for CTL activity was a 4 h 51Cr release from labeled adenocarcinoma target cells. Eleven of the 16 immunized patients were tested for CTL activity using class-I-matched adenocarcinoma target cell lines. Evidence for class-I-restricted killing of **MUC1**-expressing tumor cell lines was obtained in 7 of these 11.

ST breast cancer **MUC1** cytotoxic T lymphocyte

IT Immunoglobulins
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(G; anti-**MUC1** class I restricted CTLs in metastatic breast cancer patients immunized with a synthetic **MUC1 peptide**)

IT **Histocompatibility antigens**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(**MHC (major histocompatibility complex), class I**; anti-**MUC1** class I restricted CTLs in metastatic breast cancer patients immunized with a synthetic **MUC1 peptide**)

IT **Peptides, biological studies**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(**MUC1**; anti-**MUC1** class I restricted CTLs in metastatic breast cancer patients immunized with a synthetic **MUC1 peptide**)

IT T cell (lymphocyte)
(cytotoxic; anti-**MUC1** class I restricted CTLs in metastatic breast cancer patients immunized with a synthetic **MUC1 peptide**)

IT Mucins
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(episialins; anti-**MUC1** class I restricted CTLs in metastatic breast cancer patients immunized with a synthetic **MUC1 peptide**)

IT Mammary gland
(neoplasm; anti-**MUC1** class I restricted CTLs in metastatic breast cancer patients immunized with a synthetic **MUC1 peptide**)

IT 149205-73-2
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(anti-**MUC1** class I restricted CTLs in metastatic breast cancer patients immunized with a synthetic **MUC1 peptide**)

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L41 ANSWER 12 OF 16 HCAPLUS COPYRIGHT 2003 ACS
AN **1998:211482** HCAPLUS
DN **129:3654**
TI Intercellular and intracellular events following the MHC-unrestricted TCR recognition of a tumor-specific **peptide** epitope on the epithelial **antigen MUC1**
AU Magarian-Blander, Julie; Ciborowski, Pawel; Hsia, Shyuan; Watkins, Simon C.; Finn, Olivera J.
CS Departments Molecular Genetics and Biochemistry, Univ. Pittsburgh School Medicine, Pittsburgh, PA, 15261, USA
SO Journal of Immunology (**1998**), 160(7), 3111-3120
CODEN: JOIMA3; ISSN: 0022-1767
PB American Association of Immunologists
DT Journal
LA English
CC 15-2 (Immunochemistry)
AB We examd. the functional and mol. parameters involved in direct TCR recognition of a tumor-specific **peptide** epitope on the tumor Ag **MUC1**. This **peptide** epitope is tandemly repeated and recognized on the native mol. rather than processed and bound to the MHC. Even though the TCR was not MHC restricted, intercellular interactions found to facilitate this recognition included intercellular adhesion mol.-1/LFA-1, LFA-3/CD2, and class I/CD8. Intracellular parameters of MHC-unrestricted CTL activation were examd. to compare the recognition of the **MUC1** epitope presented on synthetic microspheres, with the recognition of the native epitope in the context of other mols. on the target cells. The epitope on microspheres induced a transient influx of Ca2+ that was not accompanied by detectable tyrosine phosphorylation of the .zeta.-assocd. protein ZAP-70, whereas recognition of **MUC1** epitopes on tumor cells caused a sustained Ca2+ influx and ZAP-70 phosphorylation. The transient influx of Ca2+ was not sufficient to cause translocation of the nuclear factor of activated T cells (NF-AT) into the nucleus or CTL proliferation. In contrast, recognition of the **MUC1** epitope on tumor cells resulted in full activation of the

CTL, nuclear translocation of NF-AT, and proliferation. MHC-unrestricted TCR triggering, therefore, involves similar intercellular and intracellular events that participate in the conventional, MHC-restricted Ag recognition. Direct recognition of the **MUC1 peptide** epitope by the TCR in the absence of presentation by the MHC induces a partial signal that is completed by further interactions of other receptor/ligand pairs on the surface of the CTL and their target cells.

ST tumor **MUC1** epitope CTL TCR signaling

IT Cell adhesion molecules
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(ICAM-1 (intercellular adhesion mol. 1); intercellular and intracellular events following MHC-unrestricted TCR recognition of a tumor-specific **peptide** epitope on epithelial **antigen MUC1**)

IT **Histocompatibility antigens**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**MHC (major histocompatibility complex), class I**; intercellular and intracellular events following MHC-unrestricted TCR recognition of a tumor-specific **peptide** epitope on epithelial **antigen MUC1**)

IT Transcription factors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(NF-AT; intercellular and intracellular events following MHC-unrestricted TCR recognition of a tumor-specific **peptide** epitope on epithelial **antigen MUC1**)

IT Cell proliferation
(T cell; intercellular and intracellular events following MHC-unrestricted TCR recognition of a tumor-specific **peptide** epitope on epithelial **antigen MUC1**)

IT Phosphoproteins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(ZAP-70 (TCR receptor .zeta.-chain-assocd., 70,000-mol.-wt.); intercellular and intracellular events following MHC-unrestricted TCR recognition of a tumor-specific **peptide** epitope on epithelial **antigen MUC1**)

IT T cell (lymphocyte)
(cytotoxic; intercellular and intracellular events following MHC-unrestricted TCR recognition of a tumor-specific **peptide** epitope on epithelial **antigen MUC1**)

IT Mucins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(episialins; intercellular and intracellular events following MHC-unrestricted TCR recognition of a tumor-specific **peptide** epitope on epithelial **antigen MUC1**)

IT Biological transport
(influx; intercellular and intracellular events following MHC-unrestricted TCR recognition of a tumor-specific **peptide** epitope on epithelial **antigen MUC1**)

IT Antitumor agents
Cell nucleus
Epithelium
Epitopes
Signal transduction, biological
(intercellular and intracellular events following MHC-unrestricted TCR recognition of a tumor-specific **peptide** epitope on epithelial **antigen MUC1**)

IT CD2 (**antigen**)
CD8 (**antigen**)

LFA-1 (**antigen**)
LFA-3 (**antigen**)
TCR (T cell receptors)
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(intercellular and intracellular events following MHC-unrestricted TCR recognition of a tumor-specific **peptide** epitope on epithelial **antigen MUC1**)

IT Biological transport
(intracellular; intercellular and intracellular events following MHC-unrestricted TCR recognition of a tumor-specific **peptide** epitope on epithelial **antigen MUC1**)

IT T cell (lymphocyte)
(proliferation; intercellular and intracellular events following MHC-unrestricted TCR recognition of a tumor-specific **peptide** epitope on epithelial **antigen MUC1**)

IT Phosphorylation, biological
(protein; intercellular and intracellular events following MHC-unrestricted TCR recognition of a tumor-specific **peptide** epitope on epithelial **antigen MUC1**)

IT 7440-70-2, Calcium, biological studies 148047-34-1, Kinase (phosphorylating), protein ZAP-70
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(intercellular and intracellular events following MHC-unrestricted TCR recognition of a tumor-specific **peptide** epitope on epithelial **antigen MUC1**)

IT 207353-40-0, 116-215-Mucin (human)
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)
(intercellular and intracellular events following MHC-unrestricted TCR recognition of a tumor-specific **peptide** epitope on epithelial **antigen MUC1**)

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L41 ANSWER 13 OF 16 HCAPLUS COPYRIGHT 2003 ACS
AN **1998:181789** HCAPLUS
DN **128:293738**
TI **Peptide** mimics of a tumor **antigen** induce functional cytotoxic T cells
AU Apostolopoulos, Vasso; Lofthouse, Shari A.; Popovski, Violeta; Chelvanayagam, Gareth; Sandrin, Mauro S.; McKenzie, Ian F. C.
CS Austin Res. Inst., Heidelberg, 3084, Australia
SO Nature Biotechnology (**1998**), 16(3), 276-285
CODEN: NABIF9; ISSN: 1087-0156
PB Nature America
DT Journal
LA English
CC 15-2 (Immunochemistry)
AB The ability to mimic **peptide/peptide** and/or **peptide**/carbohydrate structures may be important in generating cross-reactive antibodies for autoimmune and other diseases. We show that the **peptide** sequence DAHWESWL can mimic the conformation of the unrelated **MUC1 peptide** SAPDTRPAP(G). Mice immunized with mannan-**MUC1-peptides** make cytotoxic T lymphocytes (CTLs) and are protected from **MUC1**+ tumors. We show that the same specific anti-**MUC1** responses can be produced by immunizing with the DAHWESWL **peptide**; furthermore, specific tumor protection is obtained in a manner similar to that with **MUC1** immunization. The DAHWESWL **peptide** immunization leads to CTLs that recognize H2Dd and H2La but not H2b or human leukocyte **antigens**-group A (HLA-A)*0201 presented **MUC1 peptides**. However, mutation of the DAHWESWL **peptide** to a more HLA-A*0201-compatible structure with appropriate anchors (DLHWASWV), leads to the prodn. of CTLs in HLA-A*0201 mice.
ST **MUC1 peptide** mimic antitumor vaccine CTL
IT **Histocompatibility antigens**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**H-2Dd; peptide** mimics of a tumor **antigen** induce functional cytotoxic T cells)
IT **Histocompatibility antigens**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**H-2Ld; peptide** mimics of a tumor

antigen induce functional cytotoxic T cells)
IT **Histocompatibility antigens**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**HLA-A**; **peptide** mimics of a tumor **antigen** induce functional cytotoxic T cells)
IT T cell (lymphocyte)
(cytotoxic; **peptide** mimics of a tumor **antigen** induce functional cytotoxic T cells)
IT Mucins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(episialins; **peptide** mimics of a tumor **antigen** induce functional cytotoxic T cells)
IT Antitumor agents
Cytolysis
Peptidomimetics
Vaccines
(**peptide** mimics of a tumor **antigen** induce functional cytotoxic T cells)
IT Conformation
(protein; **peptide** mimics of a tumor **antigen** induce functional cytotoxic T cells)
IT **Antigens**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(tumor-specific **antigens**; **peptide** mimics of a tumor **antigen** induce functional cytotoxic T cells)
IT 189064-85-5 206259-52-1
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**peptide** mimics of a tumor **antigen** induce functional cytotoxic T cells)
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L41 ANSWER 14 OF 16 HCAPLUS COPYRIGHT 2003 ACS
AN 1997:692497 HCAPLUS
DN 127:328035
TI **MUC1 peptide** epitopes associated with five different H-2 class I molecules
AU Apostolopoulos, Vasso; Haurum, John S.; McKenzie, Ian F. C.
CS Austin Research Institute, Heidelberg, 3084, Australia
SO European Journal of Immunology (**1997**), 27(10), 2579-2587
CODEN: EJIMAF; ISSN: 0014-2980
PB Wiley-VCH
DT Journal
LA English
CC 6-3 (General Biochemistry)
Section cross-reference(s): 15
AB Previously the induction of murine CD8+ MHC class I-restricted cytotoxic T cells (CTL) was described recognizing the 20-amino acid repeat region of the human mucin 1 (**MUC1**) variable no. of tandem repeats region (VNTR), a mucin greatly increased in expression in breast cancer and proposed as a target for immunotherapy. CTL could detect **MUC1 peptides** assocd. with the MHC of all 9 strains examd., and the different epitopes were now reported presented by 5 different MHC class I mols. The epitopes were defined in CTL assays using **peptide** -pulsed phytohemagglutinin blasts or MHC class I-transfected L cells as targets; in addn., **peptide** binding assays and T cell proliferation studies were performed. Within the 20-amino acid VNTR, 9 potential epitopes were defined. The epitopes for the 4 MHC class I mols. [Kb (three epitopes), Dd, Ld, and Kk] were closely related, all contg. the amino acids PDTRPAP. For Db, 3 epitopes were identified, all contg. APGSTAP. Most of the epitopes did not contain a consensus motif for the particular MHC class I allele, and bound with low "affinity", compared with known high-affinity **peptides**. CD8+ T cell proliferation also occurred to the same MHC class I-presented epitopes. Finally, when conventional anchor residues were introduced into the pep-tides, **peptide** binding increased, whereas CTL recognition was either retained (Kb) or lost (Db) depending on the epitope.
ST **MUC1 peptide** epitope MHCI H2 **antigen**; protein sequence **MUC1 peptide**
IT **Histocompatibility antigens**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(**H-2Db; MUC1 peptide** epitopes assocd. with 5 different **H-2 class I** mols.)
IT **Histocompatibility antigens**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(**H-2Dd; MUC1 peptide** epitopes assocd. with 5 different **H-2 class I** mols.)
IT **Histocompatibility antigens**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(**H-2Kb, H-2Kb; MUC1 peptide** epitopes assocd. with 5 different **H-2 class I** mols.)
IT **Histocompatibility antigens**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(**H-2Kk**, H-2Lb; **MUC1 peptide** epitopes assocd. with 5 different **H-2 class I** mols.)

IT **Histocompatibility antigens**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(**H-2Ld**; **MUC1 peptide** epitopes assocd. with 5 different **H-2 class I** mols.)

IT **Antigen** presentation
(**MUC1 peptide** epitopes assocd. with 5 different H-2 class I mols.)

IT **Peptides, biological studies**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(**MUC1 peptide** epitopes assocd. with 5 different H-2 class I mols.)

IT T cell (lymphocyte)
(cytotoxic; **MUC1 peptide** epitopes assocd. with 5 different H-2 class I mols.)

IT Mucins
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(episialins; **MUC1 peptide** epitopes assocd. with 5 different H-2 class I mols.)

IT Epitopes
(mapping; **MUC1 peptide** epitopes assocd. with 5 different H-2 class I mols.)

IT 121501-23-3 129437-43-0 136182-68-8 158092-77-4 158092-78-5
158092-79-6 158092-80-9 158092-81-0 158092-82-1 186412-97-5
198020-60-9 198020-62-1 198020-64-3 198020-65-4 198020-66-5
198020-67-6 198020-69-8 198020-70-1 198020-71-2 198020-72-3
RL: PRP (Properties)
(amino acid sequence of **MUC1 peptide** epitopes assocd. with 5 different H-2 class I mols.)

L41 ANSWER 15 OF 16 HCAPLUS COPYRIGHT 2003 ACS
AN 1996:76017 HCAPLUS
DN 124:139020
TI The epithelial mucin **MUC1** contains at least two discrete signals specifying membrane localization of cells
AU Pemberton, Lucy F.; Rughetti, Aurelia; **Taylor-Papadimitriou, Joyce**; Gendler, Sandra J.
CS Imp. Cancer REs. Fund., London, WC2A 3PX, UK
SO Journal of Biological Chemistry (**1996**), 271(4), 2332-40
CODEN: JBCHA3; ISSN: 0021-9258
PB American Society for Biochemistry and Molecular Biology
DT Journal
LA English
CC 6-3 (General Biochemistry)
AB The **MUC1** gene product (PEM, polymorphic epithelial mucin) is a cell-assocd. glycoprotein expressed on the apical surface of most simple secretory epithelia. The transmembrane and cytoplasmic domains of **MUC1** have been shown to be highly conserved between mammalian species, and it has been shown that this mol. interacts with the actin cytoskeleton. Apical targeting signals in polarized cells have yet to be defined. The mechanism by which **MUC1** is targeted and maintained on the apical surface is not known; correct localization, however, would be predicted to be crucial for function. In order to det. which domains of **MUC1** were important for this localization, mutational anal. of the protein was undertaken. Using cytoplasmic tail deletion mutants,

fusion proteins of **MUC1** and CD2, and site-directed mutagenesis, it could be shown that **MUC1** appeared to contain at least two motifs involved in apical localization. The first was located in the extracellular domain and was sufficient to confer apical localization on the fusion protein. The second was the Cys-Gln-Cya (CQC) motif at the junction of the cytoplasmic and transmembrane domains. This sequence was necessary for surface expression. These results suggest that **MUC1** contains two discrete motifs important in its apical localization.

ST mucin **MUC1** membrane location signal

IT Cell membrane
(the epithelial mucin **MUC1** contains at least two discrete signals specifying membrane localization of cells)

IT Antigens
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CD2, the epithelial mucin **MUC1** contains at least two discrete signals specifying membrane localization of cells)

IT Mucins
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(episialins, the epithelial mucin **MUC1** contains at least two discrete signals specifying membrane localization of cells)

IT **Peptides, biological studies**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(signal, the epithelial mucin **MUC1** contains at least two discrete signals specifying membrane localization of cells)

L41 ANSWER 16 OF 16 HCAPLUS COPYRIGHT 2003 ACS
AN 1995:996653 HCAPLUS
DN 124:53725
TI Cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections
IN Longenecker, B. Michael; Ding, Lei; Reddish, Mark A.; Koganty, Raghupathi Rao
PA Biomira, Inc., Can.
SO PCT Int. Appl., 141 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K039-00
ICS C07K014-74
CC 15-2 (Immunochemistry)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9527505	A1	19951019	WO 1995-US4540	19950412 <--
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TT, UA				
	RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9522470	A1	19951030	AU 1995-22470	19950412 <--
PRAI	US 1994-229606		19940412 <--		
	WO 1995-US4540		19950412 <--		

AB A pharmaceutically acceptable immunogenic compn. which induces cell-mediated immunity comprises: (a) a nonnaturally occurring conjugate of a primary T-cell epitope of a cancer-assocd. **antigen** or a microbially, parasitically, or virally infected cell-assocd. **antigen** with an immunomodulatory **peptide**, or (b) a mixt. of (1) primary **antigen** bearing a T-cell epitope of a cancer-assocd. **antigen** or a microbially, parasitically, or

virally infected cell-assocd. **antigen** and (2) an immunomodulatory **peptide**, where the conjugate of (a) and the immunomodulatory **peptide** of (b) has mol. wt. <5000 Da. The immunomodulatory **peptide** comprises an **allopeptide** moiety of .gtoreq.5 amino acids whose sequence corresponds essentially to that of a polymorphic region of an MHC-encoded polymorphic Class I or Class II **antigen**. The compn. modulates a stronger cellular than humoral immune response and is useful for treatment of tumors. Thus, a synthetic **peptide** derived from cancer-assocd. mucin **MUC -1** conjugated with H2Kb(61-69) **peptide** (ERETQKAKG) preferentially induced a specific delayed-type hypersensitivity reaction to a **MUC-1**-serum albumin conjugate in allogeneic H2Ka/H2d mice, and the chimeric **MUC-1**-H2Kb **peptide** conjugated to keyhole limpet hemocyanin also induced delayed-type hypersensitivity in syngeneic C57/BL6 (H2Kb) mice.

ST cellular immunity vaccine tumor infection; **peptide** immunomodulator conjugate cellular immunity; T lymphocyte **antigen** antitumor vaccine

IT Bactericides, Disinfectants, and Antiseptics
Candida
Escherichia coli
Leishmania
Neoplasm inhibitors
Parasiticides
Plasmodium (malarial genus)
Protozoacides
Schistosoma
Shigella
Staphylococcus
Toxoplasma
Tuberculostatics
Vaccines
Virucides and Virustats
(cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)

IT Molecular structure-biological activity relationship
(cellular immunity-inducing; of histocompatibility **antigen peptides** and conjugates)

IT **Peptides, biological studies**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(immunomodulators; cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)

IT **Antigens**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(infection-assocd.; cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)

IT Immunostimulants
(**peptides**; cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)

IT Virus, animal
(Epstein-Barr, cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)

IT **Histocompatibility antigens**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**H-2D**, cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)

IT **Histocompatibility antigens**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**H-2K**, cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)

IT **Histocompatibility antigens**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**H-2L**, cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)

IT **Histocompatibility antigens**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**HLA-A**, cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)

IT **Histocompatibility antigens**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**HLA-B**, cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)

IT **Histocompatibility antigens**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**HLA-C**, cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)

IT **Histocompatibility antigens**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**MHC (major histocompatibility antigen complex), class I**, cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)

IT **Histocompatibility antigens**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**MHC (major histocompatibility antigen complex), class II**, cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)

IT Lymphocyte
(T-cell, cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)

IT Blood-group substances
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Tn, sialyl; cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)

IT Immunity
(cell-mediated, cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)

IT Hemocyanins
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(conjugates, with **peptides**; cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)

IT Virus, animal
(hepatitis B, cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)
IT Virus, animal
(herpes simplex, cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)
IT Virus, animal
(human immunodeficiency, cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)
IT Pharmaceutical dosage forms
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(immunoconjugates, cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)
IT Virus, animal
(influenza, cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)
IT Virus, animal
(rabies, cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)
IT **Antigens**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tumor-assocd., cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)
IT Interferons
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(.gamma., cellular immune response mediation by; cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)
IT 149205-73-2 172284-96-7 172284-97-8 172284-98-9 172284-99-0
172285-00-6 172285-01-7 172285-02-8 172285-03-9 172285-04-0
172285-05-1 172285-06-2
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)
IT 96031-92-4
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(of H2Kb **antigen**; cellular immune response-specific **antigens** as vaccines for treatment of tumors and infections)

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(FILE 'HOME' ENTERED AT 19:22:50 ON 08 MAY 2003)
SET COST OFF

FILE 'HCAPLUS' ENTERED AT 19:24:55 ON 08 MAY 2003
E US2000-187215/AP,PRN
L1 1 S E5
E MUC
L2 1212 S E4 OR E3()1
E PROTEIN SEQUENCE/CT
E E11+ALL
L3 222450 S E2 OR E9+NT

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L4          128 S L2 AND L3
L5           93 S E2 AND L4
L6          412 S L2 AND ?PEPTIDE?
L7          467 S L4,L5,L6
L8          282 S L7 AND (PY<=1999 OR PRY<=1999 OR AY<=1999)
                E MHC/CT
                E E11+ALL
L9         3232 S E2
                E HISTOCOMPATIBILITY/CT
L10          87 S E5-E118 AND L2
                E E5+ALL
L11          89 S E4,E3+NT AND L2
L12          19 S L2 AND L9
L13          22 S L10-L12 AND L8
L14          22 S L7 AND L13
                E PEPTIDE/CT
                E E87+ALL
L15         134 S L2 AND E1+NT
                E PEPTIDE SEQUENCE/CT
                E E4+ALL
L16         674 S L2 AND (PY<=1999 OR PRY<=1999 OR AY<=1999)
L17          72 S L15 AND L16
L18          22 S L8,L17 AND L9,L11
L19          22 S L18 AND ANTIGEN?
                E TAYLOR PAPADIMITRIOU /AU
L20         185 S E2-E8
                E PAPADIMIT/AU
                E KEUKAMP L/AU
                E HEUKAMP L/AU
L21           5 S E4-E6
                E OFFRINGA R/AU
L22         104 S E3,E5
                E MELIEF C/AU
L23         234 S E4,E5,E9-E18
                E ACRES B/AU
L24          24 S E3,E4
                E THOMAS M/AU
L25        1270 S E3-E63
                E THOMAS MIR/AU
L26           2 S E6
L27          61 S L20-L26 AND L2
L28          41 S L27 AND L16
L29          12 S L28 AND L7
L30          41 S L28 AND L16
L31           2 S L27 AND L9
L32           5 S L27 AND L10,L11
L33          44 S L28-L32
                SEL DN AN 2 5 12 14
L34           4 S L33 AND E1-E12
L35           2 S L33 AND L17
L36           5 S L34,L35
L37           8 S L19 AND L17
L38          13 S L36,L37
L39          13 S L19 NOT L38
                SEL DN AN 1 8 9
L40           3 S L39 AND E13-E21
L41          16 S L38,L40 AND L1-L40

     FILE 'HCAPLUS' ENTERED AT 19:45:21 ON 08 MAY 2003
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